

REMARKS

By the present amendment, independent claim 1 has been amended to further clarify the concepts of the present invention. In particular, independent claim 1 has been amended to incorporate the subject matter of dependent claims 14, 15 and 17 therein. Accordingly, dependent claims 14, 15 and 17 have been canceled and the dependency of claim 16 has been modified.

It is submitted that these amendments to independent claim 1 are helpful in distinguishing the subject claims over the cited prior art and do not raise new issues which would require further consideration and/or search. In addition, it is submitted that such amendments place the application in better form for appeal by materially reducing or simplifying the issues for appeal. Furthermore, no additional claims are presented without cancelling a corresponding number of finally rejected claims. In view of the above, it is submitted that entry of the above amendments is in order and such is respectfully requested.

In the Office Action, claims 1, 4 and 9-21 were finally rejected under 35 USC § 103(a) as being unpatentable over the previously cited patents to Duggan, Atwood et al, Gandon et al, Baczek et al and Cain. As before, it was alleged in making the rejection that the cited Duggan patent teaches the process as claimed in claim 1, with the exception of (a) specifics as steps (1) and (2) in terms of the chlorine-aided leaching step and the copper ion reduction step; and (b) the use of step (5) in terms of iron electrowinning. The Atwood et al patent was then alleged to teach the specifics as to (a) except of leaching by

continuously blowing chlorine gas into the slurry, and the Cain patent was alleged to teach the use of (b) in the refining of raw copper.

The patent to Gandon et al was alleged to supply the deficiencies of the Atwood et al patent with respect to continuously blowing of chlorine gas. The patent to Baczek et al allegedly disclosed that the size of milled chalcopyrite particles affects the efficiency of a copper leaching process. It was further asserted that the recited temperature and the recited oxidation reduction potential would be apparent to those skilled in the art. Reconsideration of this rejection in view of the above claim amendments and the following comments is respectfully requested.

As mentioned above, the subject matter of dependent claims 14, 15, and 17 have been incorporated into independent claim 1 so as to further distinguish the subject invention over the teachings of the cited patents. In particular, the independent claim now recites further specifics as to the electrowinning step as well as to the return of certain process streams. It is submitted that the process for refining raw copper material containing copper sulfide mineral as defined by independent claim 1 is not taught or suggested by the cited patents whether taken singly or in combination.

Among other things, it is submitted that one of ordinary skill the art would not be led to combine the teachings of five separate patents to achieve the presently claimed invention. In particular, it must be emphasized in support of the patentability of the subject invention over the teachings of the cited patents is that none of these patents provides a suggestion to motivate one of ordinary skill in the art to combine their teachings in the manner proposed in the rejection. It is well established principle of U.S. patent practice

that the prior art must contain some suggestion for combination since without such, any combination is pure speculation on the part of the examiner and is based on a prohibited hindsight reconstruction from applicants' own disclosure.

For the reasons stated above, withdrawal of the rejections under 35 U.S.C. § 103(a) and allowance of claims 1, 4 and 9-13, 16 and 18-21 and as amended over the cited patents are respectfully requested.

Dependent claim 22 was rejected under 35 USC 103(a) as being obvious over the same patents to Duggan, Atwood et al, Baczek et al, Gandon et al and Cain as applied to the claims mentioned above further in view of the patent to Subramanian et al. In making this rejection, it was asserted that the Subramanian et al patent teaches the use of a second electrorefining step in producing silver slime. It was concluded that it would be obvious to one of ordinary skill to utilize the additional teaching in conjunction with the other teachings. Reconsideration of this rejection in view of the above claim amendments and the following comments is respectfully requested.

The above remarks relative to the teaching deficiencies of the patents to Duggan, Atwood et al, Cain, Baczek et al and Gandon et al are reiterated with regard to this rejection. It is submitted that the patent to Subramanian et al does not supply these teaching deficiencies with respect to the subject matter of independent claim 1 and the claims dependent thereon. Thus, it is submitted that the same considerations as were set forth above regarding each of the primary patents would be applicable to this rejection as well.

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For the reasons stated above, withdrawal of the rejections under 35 U.S.C. § 103(a) and allowance of dependent claim 22 over the cited patents are respectfully requested.

In view of the foregoing, it is submitted that the subject application is now in condition for allowance and early notice to that effect is earnestly solicited.

In the event this paper is not timely filed, the undersigned hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 01-2340, along with any other additional fees which may be required with respect to this paper.

Respectfully submitted,

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